AUTHOR INDEX

VOLUME 5 NUMBERS 1-4

A

ABELL, L. L. See *Rudman, Malkin, Brown, Garcia, and Abell* 38
ABRAHAM, S. See *Madsen, Abraham, and Chaikoff* 548
ABRAMSON, D., AND M. BLECHER. Quantitative two-dimensional thin-layer chromatography of naturally occurring phospholipids 628
ACKMAN, R. G., AND R. D. BURGHER. Employment of ethanol as solvent in small scale catalytic hydrogenations of methyl esters 130
AHRENS, E. H., JR. Editorial Announcements 1
———. See *Horning, Ahrens, Lipsky, Mattson, Mead, Turner, and Goldwater* 20
AÏVAZIS, G. A. M. See *Galanos, Aïvazis, and Kapoulas* 242
ALAUPOVIC, P. See *Crider, Alaupovic, Hillsberry, Yen, and Bradford* 479
ALFORD, J. A., D. A. PIERCE, AND F. G. SUGGS. Activity of microbial lipases on natural fats and synthetic triglycerides 390
AMENTA, J. S. A rapid chemical method for quantification of lipids separated by thin-layer chromatography 270

B

BACZYNSKI, E. See *Turner, Silver, Baczynski, Giordano, and Rodalewicz* 616
BAKER, N., AND M. C. SCHOTZ. Use of multicompartmental models to measure rates of triglyceride metabolism in rats 188
———. See *Schotz, Baker, and Chavez* 569
BENSON, A. A. See *O'Brien and Benson* 432
BEVERIDGE, J. M. R. See *McCarthy, Kuksis, and Beveridge* 609
BJÖRNSTAD, P. See *Jellum and Björnstad* 314
BLECHER, M. See *Abramson and Blecher* 628
BROGSTRÖM, B. Influence of bile salt, pH, and time on the action of pancreatic lipase; physiological implications 522
BRADFORD, R. H. See *Crider, Alaupovic, Hillsberry, Yen, and Bradford* 479
BRONTE-STEWART, B. See *Krut and Bronte-Stewart* 343
BROT, N., W. J. LOSSOW, AND I. L. CHAIKOFF. In vitro uptake and hydrolysis, by rat tissues, of cholesterol esters of a very low density, chyle lipoprotein fraction 63
———. See *Lossow, Migliorini, Brot, and Chaikoff* 198
———. See *Noyan, Lossow, Brot, and Chaikoff* 538
BROWN, S. J. See *Rudman, Garcia, Brown, Malkin, and Perl* 28
———. See *Rudman, Malkin, Brown, Garcia, and Abell* 38
BURGHER, R. D. See *Ackman and Burgher* 130

C

CAMEJO, G., M. M. RAPPORT, AND G. A. MORRILL. The structure of plasmalogens: VII. Analysis of mammalian liver lipids and the interference of vitamin A in the analysis 75
CHAIKOFF, I. L. See *Brot, Lossow, and Chaikoff* 63
———. See *Lossow, Migliorini, Brot, and Chaikoff* 198
———. See *Madsen, Abraham, and Chaikoff* 548
———. See *Noyan, Lossow, Brot, and Chaikoff* 538
CHAVEZ, M. N. See *Schotz, Baker, and Chavez* 569
CLAYTON, R. B. The utilization of sterols by insects 3
COOTS, R. H. A comparison of the metabolism of elaidic, oleic, palmitic, and stearic acids in the rat 468
———. A comparison of the metabolism of *cis,cis*-linoleic, *trans,trans*-linoleic, and a mixture of *cis,trans*- and *trans,cis*-linoleic acids in the rat 473
CORNWELL, D. G. See *Holla, Horrocks, and Cornwell* 263
CRIDER, Q. E., P. ALAUPOVIC, J. HILLSBERRY, C. YEN, AND R. H. BRADFORD. Separation of lipids by Silica Gel G column chromatography 479

D

DAY, A. J., AND N. H. FIDGE. Incorporation of C^{14}-labeled acetate into lipids by macrophages in vitro 163
DE VRIES, B. See *Jurriens, de Vries, and Schouten* 267, 366
DI LUZIO, N. R. See *Poggi and Di Luzio* 437
DITTMER, J. C., AND R. L. LESTER. A simple, specific spray for the detection of phospholipids on thin-layer chromatograms 126
DJIBELIAN, L. G. See *Kerr, Kfoury, and Djibelian* 481
DOWNING, D. T. Branched-chain fatty acids in lipids of the newly born lamb 210

E

ENEROTH, P., K. HELLSTRÖM, AND R. RYHAGE. Identification and quantification of neutral fecal steroids by gas–liquid chromatography and mass spectrometry: studies of human excretion during two dietary regimens 245
ENG, L. F., Y. L. LEE, R. B. HAYMAN, AND B. GERSTL. Separation and isolation of methyl esters and dimethylacetals formed from brain lipids 128
EVANS, J. D., AND L. N. NORCIA. Incorporation of acetate-C^{14} into individual fatty acids of rat liver triglycerides and phospholipids 395

F

FARKAS, T., AND S. HERODEK. The effect of environmental temperature on the fatty acid composition of crustacean plankton 369
FIDGE, N. H. See *Day and Fidge* 163
FILLERUP, D. L. See *O'Brien, Fillerup, and Mead* 109, 329
FREEMAN, N. K. Simultaneous determination of triglycerides and cholesterol esters in serum by infrared spectrophotometry 236

———. See *Lindgren, Nichols, Freeman, Wills, Wing, and Gullberg* 68
FRITZ, I. B. See *Marquis and Fritz* 184

G

GALANOS, D. S., G. A. M. AÏVAZIS, AND V. M. KAPOULAS. A simple method for the determination of serum glycerides, free cholesterol, and cholesterol esters using a binary solvent system 242
GARCIA, L. A. See *Rudman, Garcia, Brown, Malkin, and Perl* 28
———. See *Rudman, Malkin, Brown, Garcia, and Abell* 38
GAYLOR, J. L., AND F. M. SAULT. Localization and biosynthesis of 7-dehydrocholesterol in rat skin 422
GERSTL, B. See *Eng, Lee, Hayman, and Gerstl* 128
GIORDANO, N. See *Turner, Silver, Baczynski, Giordano, and Rodalewicz* 616
GOLDWATER, W. H. See *Horning, Ahrens, Lipsky, Mattson, Mead, Turner, and Goldwater* 20
GOODMAN, DEW. S., AND T. SHIRATORI. Fatty acid composition of human plasma lipoprotein fractions 307
——— and ———. In vivo turnover of different cholesterol esters in rat liver and plasma 578
GRÉEN, K., AND B. SAMUELSSON. Prostaglandins and related factors: XIX. Thin-layer chromatography of prostaglandins 117
GULLBERG, J. E. See *Lindgren, Nichols, Freeman, Wills, Wing, and Gullberg* 68

H

HAMILTON, J. G. See *Pinter, Hamilton, and Muldrey* 273
HANAHAN, D. J. See *Ways and Hanahan* 318
HART, P. See *Lands and Hart* 81
HAYMAN, R. B. See *Eng, Lee, Hayman, and Gerstl* 128
HELLSTRÖM, K. See *Eneroth, Hellström, and Ryhage* 245
HERODEK, S. See *Farkas and Herodek* 369
HILLSBERRY, J. See *Crider, Alaupovic, Hillsberry, Yen, and Bradford* 479
HIRSCH, R. L., D. G. MCKAY, R. I. TRAVERS, AND R. K. SKRALY. Hyperlipidemia, fatty liver, and bromsulfophthalein retention in rabbits injected intravenously with bacterial endotoxins 563
HITCHCOCK, C., AND A. T. JAMES. Oxidation of unsaturated fatty acids by leaf tissue 593
HO, R. J., AND H. C. MENG. A technique for the cannulation and perfusion of isolated rat epididymal fat pad 203
HOLLA, K. S., L. A. HORROCKS, AND D. G. CORNWELL. Improved determination of glycerol and fatty acids in glycerides and ethanolamine phosphatides by gas–liquid chromatography 263
HOLMAN, R. T. See *Rahm and Holman* 169
HORNING, E. C., E. H. AHRENS, JR., S. R. LIPSKY, F. H. MATTSON, J. F. MEAD, D. A. TURNER, AND W. H. GOLDWATER. Quantitative analysis of fatty acids by gas–liquid chromatography 20
HORROCKS, L. A. See *Holla, Horrocks, and Cornwell* 263

I

IMAICHI, K. See *Wood, Imaichi, Knowles, Michaels, and Kinsell* 225

J

JAMES, A. T. See *Hitchcock and James* 593
JELLUM, E., AND P. BJÖRNSTAD. Quantitative gas–liquid chromatographic determination of free glycerol in blood serum 314
JENSEN, R. G. See *Komarek, Jensen, and Pickett* 268
JESTING, E. A method for concentration of biological fluids in large quantities 135
JOHNSTON, P. V., AND B. I. ROOTS. A source of contamination in the ultramicro analysis of methyl esters of fatty acids by gas–liquid chromatography 477
JURRIENS, G., B. DE VRIES, AND L. SCHOUTEN. Quantitative analysis of mixtures of glycerides 267
———, ———, and ———. Quantitative semimicro analysis of triglyceride fatty acid distribution in a Congo palm oil 366

K

KAPLANIS, J. N. See *Vroman, Kaplanis, and Robbins* 418
KAPOULAS, V. M. See *Galanos, Aïvazis, and Kapoulas* 242
KATES, M. Simplified procedures for hydrolysis or methanolysis of lipids 132
KATZ, I. See *Parks, Keeney, Katz, and Schwartz* 232
KEENEY, M. See *Parks, Keeney, Katz, and Schwartz* 232
KERR, S. E., G. A. KFOURY, AND L. G. DJIBELIAN. Preparation of brain polyphosphoinositides 481
KFOURY, G. A. See *Kerr, Kfoury, and Djibelian* 481
KINSELL, L. See *Wood, Imaichi, Knowles, Michaels, and Kinsell* 225
KISHIMOTO, Y., AND N. S. RADIN. Structures of the 2-hydroxy unsaturated fatty acids of pig brain sphingolipids 94
——— and ———. Structures of the ester-linked mono- and diunsaturated fatty acids of pig brain 98
KNOWLES, J. See *Wood, Imaichi, Knowles, Michaels, and Kinsell* 225
KOMAREK, R. J., R. G. JENSEN, AND B. W. PICKETT. Quantitative gravimetric analysis of bovine semen lipids by thin-layer chromatography 268
KOPPEL, J. L. See *Vogel, Koppel, and Olwin* 385
KORN, E. D. The fatty acids of *Euglena gracilis* 352
———. See *McBride and Korn* 442, 448, 453, 459
KRUT, L. H., AND B. BRONTE-STEWART. The fatty acids of human depot fat 343
KUKSIS, A. See *McCarthy, Kuksis, and Beveridge* 609

L

LANDS, W. E. M. See *Robertson and Lands* 88
——— and P. HART. Metabolism of glycerolipids: V. Metabolism of phosphatidic acid 81
LEE, Y. L. See *Eng, Lee, Hayman, and Gerstl* 128
LENAZ, G. See *Viviani, Sechi, and Lenaz* 52
LEPAGE, M. Isolation and characterization of an esterified form of steryl glucoside 587
———. See *Negishi, McKillican, and Lepage* 486
LESTER, R. L. See *Dittmer and Lester* 126
LEVY, R. S., AND E. D. MCGEE. Effect of protein on glycerol color development during the assay of lipoprotein lipase 265
LEWIS, L. A., AND I. H. PAGE. Effects of high spinal cord transection on serum lipid levels 216
LINDGREN, F. T., A. V. NICHOLS, N. K. FREEMAN, R. D. WILLS, L. WING, AND J. E. GULLBERG. Analysis of low-density lipoproteins by preparative ultracentrifugation and refractometry 68
LIPSKY, S. R. See *Horning, Ahrens, Lipsky, Mattson, Mead, Turner, and Goldwater* 20
LOSSOW, W. J., R. H. MIGLIORINI, N. BROT, AND I. L. CHAIKOFF. Effect of total exclusion of the exocrine pancreas in the rat upon in vitro esterification of C^{14}-labeled cholesterol

by the intestine and upon lymphatic absorption of C^{14}-labeled cholesterol 198
———. See *Brot, Lossow, and Chaikoff* 63
———. See *Noyan, Lossow, Brot, and Chaikoff* 538
LUTTON, E. S. See *Mattson, Volpenhein, and Lutton* 363
LYMAN, R. L. See *Tinoco, Shannon, and Lyman* 57

M

MADSEN, J., S. ABRAHAM, AND I. L. CHAIKOFF. Conversion of glutamate carbon to fatty acid carbon via citrate in rat epididymal fat pads 548
MALKIN, M. F. See *Rudman, Garcia, Brown, Malkin, and Perl* 28
———. See *Rudman, Malkin, Brown, Garcia, and Abell* 38
MARQUIS, N. R., AND I. B. FRITZ. Enzymological determination of free carnitine concentrations in rat tissues 184
MARTIN, J. B. See *Mattson, Volpenhein, and Martin* 374
MATTSON, F. H., R. A. VOLPENHEIN, AND E. S. LUTTON. The distribution of fatty acids in the triglycerides of the Artiodactyla (even-toed animals) 363
———, ———, and J. B. MARTIN. Esterification of hydroxy compounds by fatty acid anhydrides 374
———. See *Horning, Ahrens, Lipsky, Mattson, Mead, Turner, and Goldwater* 20
MCBRIDE, O. W., AND E. D. KORN. Presence of glycerokinase in guinea pig mammary gland and the incorporation of glycerol into glycerides 442
——— and ———. Acceptors of fatty acid for glyceride synthesis in guinea pig mammary gland 448
——— and ———. Uptake of free fatty acids and chylomicron glycerides by guinea pig mammary gland in pregnancy and lactation 453
——— and ———. The uptake of doubly labeled chylomicrons by guinea pig mammary gland and liver 459
MCCARTHY, M. J., A. KUKSIS, AND J. M. R. BEVERIDGE. Composition of molecular distillates of butter oil: isolation and identification of components other than glycerides 609
MCCLUER, R. H. See *Sambasivarao and McCluer* 103
MCGEE, E. D. See *Levy and McGee* 265
MCKAY, D. G. See *Hirsch, McKay, Travers, and Skraly* 563
MCKILLICAN, M. E. See *Negishi, McKillican, and Lepage* 486
MEAD, J. F. See *Horning, Ahrens, Lipsky, Mattson, Mead, Turner, and Goldwater* 20
———. See *O'Brien, Fillerup, and Mead* 109, 329
MENG, H. C. See *Ho and Meng* 203
MICHAELS, G. See *Wood, Imaichi, Knowles, Michaels, and Kinsell* 225
MIGLIORINI, R. H. See *Lossow, Migliorini, Brot, and Chaikoff* 198
MORRILL, G. A. See *Camejo, Rapport, and Morrill* 75
MORRISON, W. R., AND L. M. SMITH. Preparation of fatty acid methyl esters and dimethylacetals from lipids with boron fluoride–methanol 600
MULDREY, J. E. See *Pinter, Hamilton, and Muldrey* 273

N

NEGISHI, T., M. E. MCKILLICAN, AND M. LEPAGE. The use of Saran Wrap to protect chromatoplates during their exposure to iodine vapor 486
NESTEL, P. J., AND R. O. SCOW. Metabolism of chylomicrons of differing triglyceride composition 46
NICHOLS, A. V. See *Lindgren, Nichols, Freeman, Wills, Wing, and Gullberg* 68
NORCIA, L. N. See *Evans and Norcia* 395
NOYAN, A., W. J. LOSSOW, N. BROT, AND I. L. CHAIKOFF. Pathway and form of absorption of palmitic acid in the chicken 538

O

O'BRIEN, J. S., AND A. A. BENSON. Isolation and fatty acid composition of the plant sulfolipid and galactolipids 432
———, D. L. FILLERUP, AND J. F. MEAD. Brain lipids: I. Quantification and fatty acid composition of cerebroside sulfate in human cerebral gray and white matter 109
———, ———, and ———. Quantification and fatty acid and fatty aldehyde composition of ethanolamine, choline, and serine glycerophosphatides in human cerebral gray and white matter 329
——— and G. ROUSER. The fatty acid composition of brain sphingolipids: sphingomyelin, ceramide, cerebroside, and cerebroside sulfate 339
OLIVEIRA, M. M., AND M. VAUGHAN. Incorporation of fatty acids into phospholipids of erythrocyte membranes 156
OLSON, J. A. The biosynthesis and metabolism of carotenoids and retinol (vitamin A) 281
———. The effect of bile and bile salts on the uptake and cleavage of β-carotene into retinol ester (vitamin A ester) by intestinal slices 402
OLWIN, J. H. See *Vogel, Koppel, and Olwin* 385
O'NEAL, R. M. See *Suzuki and O'Neal* 624
OTTOLENGHI, A. Estimation and subcellular distribution of lecithinase activity in rat intestinal mucosa 532

P

PAGE, I. H. See *Lewis and Page* 216
PARKS, O. W., M. KEENEY, I. KATZ, AND D. P. SCHWARTZ. Isolation and characterization of the methyl ketone precursor in butter fat 232
PERL, W. See *Rudman, Garcia, Brown, Malkin, and Perl* 28
PICKETT, B. W. See *Komarek, Jensen, and Pickett* 268
PIERCE, D. A. See *Alford, Pierce, and Suggs* 390
PINTER, K. G., J. G. HAMILTON, AND J. E. MULDREY. A method for rapid microsynthesis of radioactive cholesterol esters 273
POGGI, M., AND N. R. DI LUZIO. The role of liver and adipose tissue in the pathogenesis of the ethanol-induced fatty liver 437

R

RADIN, N. S. See *Kishimoto and Radin* 94, 98
RAHM, J. J., AND R. T. HOLMAN. The relationship of single dietary polyunsaturated fatty acids to fatty acid composition of lipids from subcellular particles of liver 169
RAPPORT, M. M. See *Camejo, Rapport, and Morrill* 75
ROBBINS, W. E. See *Vroman, Kaplanis, and Robbins* 418
ROBERTSON, A. F., AND W. E. M. LANDS. Metabolism of phospholipids in normal and spherocytic human erythrocytes 88
RODALEWICZ, I. See *Turner, Silver, Baczynski, Giordano, and Rodalewicz* 616
ROOTS, B. I. See *Johnston and Roots* 477
ROUSER, G. See *O'Brien and Rouser* 339
RUDMAN, D., L. A. GARCIA, S. J. BROWN, M. F. MALKIN, AND W. PERL. Dose–response curves for the adipokinetic action of aromatic amines and adrenocorticotropin upon the isolated adipose tissue of the hamster 28
———, M. F. MALKIN, S. J. BROWN, L. A. GARCIA, AND L. L. ABELL. Inactivation of adrenocorticotropin, α-

and β-melanocyte-stimulating hormones, vasopressin, and pituitary fraction H by adipose tissue 38
RYHAGE, R. See *Eneroth, Hellström, and Ryhage* 245

S

SACHS, B. A. See *Wolfman and Sachs* 127
SAMBASIVARAO, K., AND R. H. MCCLUER. Lipid components of gangliosides 103
SAMUELSSON, B. See *Grêen and Samuelsson* 117
SAULT, F. M. See *Gaylor and Sault* 422
SCHNATZ, J. D. Automatic titration of free fatty acids 483
SCHOTZ, M. C., N. BAKER, AND M. N. CHAVEZ. Effect of carbon tetrachloride ingestion on liver and plasma triglyceride turnover rates 569
———. See *Baker and Schotz* 188
SCHOUTEN, L. See *Jurriens, de Vries, and Schouten* 267, 366
SCHWARTZ, D. P. See *Parks, Keeney, Katz, and Schwartz* 232
SCOW, R. O. See *Nestel and Scow* 46
SECHI, A. M. See *Viviani, Sechi, and Lenaz* 52
SENIOR, J. R. Intestinal absorption of fats 495
SHANNON, A. See *Tinoco, Shannon, and Lyman* 57
SHAPIRO, B. See *Tzur and Shapiro* 542
SHIRATORI, T. See *Goodman and Shiratori* 307, 578
SILVER, M. J. See *Turner, Silver, Baczynski, Giordano, and Rodalewicz* 616
SKRALY, R. K. See *Hirsch, McKay, Travers, and Skraly* 563
SMITH, L. M. See *Morrison and Smith* 600
SMITH, P. F. Relation of sterol structure to utilization in pleuropneumonia-like organisms 121
STEINBERG, D. See *Strand, Vaughan, and Steinberg* 554
STRAND, O., M. VAUGHAN, AND D. STEINBERG. Rat adipose tissue lipases: hormone-sensitive lipase activity against triglycerides compared with activity against lower glycerides 554
SUGGS, F. G. See *Alford, Pierce, and Suggs* 390
SUZUKI, M., AND R. M. O'NEAL. Accumulation of lipids in the leukocytes of rats fed atherogenic diets 624
SVENNERHOLM, L. The gangliosides 145

T

TINOCO, J., A. SHANNON, AND R. L. LYMAN. Serum lipids in choline-deficient male and female rats 57
TRAVERS, R. I. See *Hirsch, McKay, Travers, and Skraly* 563
TURNER, D. A. See *Horning, Ahrens, Lipsky, Mattson, Mead, Turner, and Goldwater* 20
TURNER, D. L., M. J. SILVER, E. BACZYNSKI, N. GIORDANO, AND I. RODALEWICZ. Synthesis and activity in blood clotting systems of unsaturated racemic phosphatidyl serines 616
TZUR, R., AND B. SHAPIRO. Dependence of microsomal lipid synthesis on added protein 542

V

VAUGHAN, M. See *Oliveira and Vaughan* 156
———. See *Strand, Vaughan, and Steinberg* 554
VIVIANI, R., A. M. SECHI, AND G. LENAZ. Fatty acid composition of portal fatty liver in lysine- and threonine-deficient rats 52
VOGEL, W. C., J. L. KOPPEL, AND J. H. OLWIN. The effect of phosphatidyl choline on the degradation of phosphatidyl ethanolamine by the phospholipase of post-heparin plasma or snake venom 385
——— and L. ZIEVE. Post-heparin phospholipase 177
VOLPENHEIN, R. A. See *Mattson, Volpenhein, and Lutton* 363
———. See *Mattson, Volpenhein, and Martin* 374
VROMAN, H. E., J. N. KAPLANIS, AND W. E. ROBBINS. Cholesterol turnover in the American cockroach, *Periplaneta americana* (L.) 418

W

WAYS, P., AND D. J. HANAHAN. Characterization and quantification of red cell lipids in normal man 318
WILLS, R. D. See *Lindgren, Nichols, Freeman, Wills, Wing, and Gullberg* 68
WILSON, J. D. The quantification of cholesterol excretion and degradation in the isotopic steady state in the rat: the influence of dietary cholesterol 409
WING, L. See *Lindgren, Nichols, Freeman, Wills, Wing, and Gullberg* 68
WOFLMAN, L., AND B. A. SACHS. Separation of cholesterol and desmosterol by thin-layer chromatography 127
WOOD, P., K. IMAICHI, J. KNOWLES, G. MICHAELS, AND L. KINSELL. The lipid composition of human plasma chylomicrons 225

Y

YEN, C. See *Crider, Alaupovic, Hillsberry, Yen, and Bradford* 479

Z

ZBINDEN, G. Transient thrombopenia after intravenous injection of certain fatty acids 378
ZEITMAN, B. B. Blueprint records of thin-layer chromatograms 628
ZIEVE, L. See *Vogel and Zieve* 177
ZILVERSMIT, D. B. Extraction of cholesterol from human serum lipoprotein films 300

SUBJECT INDEX

VOLUME 5 NUMBERS 1-4

A

Absorption
Lymphatic; of cholesetrol, total exclusion of exocrine pancreas and, *Lossow, Migliorini, Brot, and Chaikoff* 198
Of palmitic acid in chicken, *Noyan, Lossow, Brot, and Chaikoff* 538

Acetate-C^{14}
Incorporation into individual fatty acids of rat liver triglycerides and phospholipids, *Evans and Norcia* 395
Incorporation into lipids of macrophages, *Day and Fidge* 163

Adipokinetic action: Aromatic amines and adrenocorticotropin dose–response curves, *Rudman, Garcia, Brown, Malkin, and Perl* 28

Adipose tissue
Cannulation and perfusion of epididymal fat pad, *Ho and Meng* 203
Characteristics of component which inactivates ACTH and vasopressin, *Rudman, Malkin, Brown, Garcia, and Abell* 42
Free carnitine concentration in, *Marquis and Fritz* 186
Inactivation of adrenocorticotropin, α- and β-melanocyte-stimulating hormones, vasopressin, and pituitary fraction H by, *Rudman, Malkin, Brown, Garcia, and Abell* 38
Isolated; adipokinetic action of aromatic amines and adrenocorticotropin upon, *Rudman, Garcia, Brown, Malkin, and Perl* 28
Lipase from; hormone-sensitive activity against triglycerides compared with activity against lower glycerides, *Strand, Vaughan, and Steinberg* 554
Removal of chylomicrons from circulation, rate, *Nestel and Scow* 48
Role in pathogenesis of ethanol-induced fatty liver, *Poggi and Di Luzio* 437
Subcutaneous; fatty acid composition, *Krut and Bronte-Stewart* 345
Uptake and hydrolysis of C^{14}-labeled cholesterol esters, *Brot, Lossow, and Chaikoff* 65

Adrenal gland: Uptake and hydrolysis of C^{14}-labeled cholesterol esters, *Brot, Lossow, and Chaikoff* 65

Adrenocorticotropin
Dose–response curves for isolated hamster adipose tissue, *Rudman, Garcia, Brown, Malkin, and Perl* 28
Inactivation of, by adipose tissue, *Rudman, Malkin, Brown, Garcia, and Abell* 38

Age: Serum cholesterol concentration in various races and, *Krut and Bronte-Stewart* 344

Albumin: Influence on lipid synthesis by microsomes, *Tzur and Shapiro* 542

Aldehydogenic lipid: In liver of various species, *Camejo, Rapport, and Morrill* 77

Amines
Adipokinetic; application of hormone–target cell interaction theories, *Rudman, Garcia, Brown, Malkin, and Perl* 33
structure–activity relationship, *Rudman, Garcia, Brown, Malkin, and Perl* 31
Aromatic; dose–response curves for isolated adipose tissue, *Rudman, Garcia, Brown, Malkin, and Perl* 28

Amino acid deficiencies: Fatty acid composition of portal fatty liver in, *Viviani, Sechi, and Lenaz* 52

Artiodactyla: Fatty acids of triglycerides of, *Mattson, Volpenhein, and Lutton* 363

Atherogenic diets: Lipid accumulation in rats during, *Suzuki and O'Neal* 624

B

Bile
Effect on uptake and cleavage of β-carotene into retinol ester by intestinal slices, *Olson* 402
Salts; effect on uptake and cleavage of β-carotene into retinol ester by intestinal slices, *Olson* 402
influence on action of pancreatic lipase, *Borgström* 522
Species differences and effect on cleavage of β-carotene into retinol ester, *Olson* 404

Bile acid: Influence of dietary cholesterol on excretion of, *Wilson* 409

Blood clotting systems: Synthesis and activity of unsaturated racemic phosphatidyl serines, *Turner, Silver, Baczynski, Giordano, and Rodalewicz* 616

Boar, wild: Fatty acid composition of triglycerides, *Mattson, Volpenhein, and Lutton* 364

Boron fluoride–methanol: Preparation of methyl esters and dimethylacetals from lipids, *Morrison and Smith* 600

Brain
Fatty acid composition of sphingolipids from, *O'Brien and Rouser* 339
Free carnitine concentration in, *Marquis and Fritz* 186
Lamb; composition of α-hydroxy acids from, *Downing* 214
Man; quantification and composition of glycerophosphatides from, *O'Brien, Fillerup, and Mead* 329
quantification and fatty acid composition of cerebroside sulfate in gray and white matter, *O'Brien, Fillerup, and Mead* 109
Pig; structures of ester-linked mono- and diunsaturated fatty acids, *Kishimoto and Radin* 98
structures of 2-hydroxy unsaturated fatty acids from sphingolipids of, *Kishimoto and Radin* 94
Preparation of phosphoinositides, *Kerr, Kfoury, and Djibelian* 481

Bromsulfophthalein retention: In rabbits injected intravenously with bacterial endotoxins, *Hirsch, McKay, Travers, and Skraly* 563

Butter fat: Isolation and characterization of the methyl ketone precursor in, *Parks, Keeney, Katz, and Schwartz* 232

Butter oil

Composition of molecular distillates, *McCarthy, Kuksis, and Beveridge* 609

Nonglyceride components, *McCarthy, Kuksis, and Beveridge* 609

C

Camel: Fatty acid composition of triglycerides, *Mattson, Volpenhein, and Lutton* 364

Carbon dioxide: Respiratory, appearance of C^{14} in, after feeding labeled fatty acids, *Coots* 474

Carbon tetrachloride: Ingestion; effect on turnover rates of liver and plasma triglycerides, *Schotz, Baker, and Chavez* 569

Carnitine: Free; enzymological determination of, *Marquis and Fritz* 184

β-Carotene: Uptake and cleavage of, into retinol ester by intestinal slices, bile and, *Olson* 402

Carotenoids: Biosynthesis and metabolism of, review, *Olson* 281

Ceramide: Fatty acid composition of, *O'Brien and Rouser* 339

Cerebrin: C_{20}-sphingosine in, *Sambasivarao and McCluer* 107

Cerebroside sulfate

Fatty acid composition of, in beef brain, *O'Brien and Rouser* 339

Quantification and fatty acid composition of, in human cerebral white and gray matter, *O'Brien, Fillerup, and Mead* 109

Cerebrosides

C_{20}-sphingosine in, *Sambasivarao and McCluer* 107

Fatty acid composition of, in beef brain, *O'Brien and Rouser* 339

Chicken: Pathway and form of absorption of palmitic acid in, *Noyan, Lossow, Brot, and Chaikoff* 538

Cholesterol

C^{14}; esterification and lymphatic absorption, total exclusion of exocrine pancreas and, *Lossow, Migliorini, Brot, and Chaikoff* 198

Dietary; degradation and excretion in isotopic steady state, *Wilson* 409

Distribution; in tissues of *Eurycotis floridana* reared on isotopic cholesterol, *Clayton* 11

Excretion; quantification of influence of dietary cholesterol, *Wilson* 409

Free; determination of, using a binary solvent system, *Galanos, Aivazis, and Kapoulas* 242

Separation from desmosterol by thin-layer chromatography, *Wolfman and Sachs* 127

Serum; relation to lipophage ratio and diet, *Suzuki and O'Neal* 625

Cholesterol esters

Determination of, using a binary solvent system, *Galanos, Aivazis, and Kapoulas* 242

Determination of, with triglycerides, *Freeman* 236

From chyle lipoprotein fraction of very low density, in vitro uptake and hydrolysis, *Brot, Lossow, and Chaikoff* 63

From serum of choline-deficient rats, *Tinoco, Shannon, and Lyman* 59

Radioactive, rapid microsynthesis of, *Pinter, Hamilton, and Muldrey* 273

Turnover rates in rat liver and plasma, *Goodman and Shiratori* 578

Choline deficiency: Serum lipids in, *Tinoco, Shannon, and Lyman* 57

Choline plasmalogens: Preparation of methyl esters from, *Morrison and Smith* 600

Chromatograms: Thin-layer; blueprint records of, *Zeitman* 628

Chromatography, column: Silica Gel G, separation of lipids by, *Crider, Alaupovic, Hillsberry, Yen, and Bradford* 479

Chromatography, gas–liquid

Analysis of butter oil by, *McCarthy, Kuksis, and Beveridge* 612

Analysis of leaf tissue lipids by, *Hitchcock and James* 594

Analysis of standard mixtures of fatty acids by, *Horning, Ahrens, Lipsky, Mattson, Mead, Turner, and Goldwater* 26

Determination (improved) of glycerol, fatty acids in glycerides and ethanolamine phosphatides by, *Holla, Horrocks, and Cornwell* 263

Identification and quantification of neutral fecal steroids, *Eneroth, Hellström, and Ryhage* 245

Instrument design, features of, *Horning, Ahrens, Lipsky, Mattson, Mead, Turner, and Goldwater* 21

Of free glycerol in blood serum, *Jellum and Björnstad* 314

Of methyl esters of fatty acids, source of contamination in, *Johnston and Roots* 477

Quantitative analysis of fatty acids by, *Horning, Ahrens, Lipsky, Mattson, Mead, Turner, and Goldwater* 20

To determine specific radioactivities of cholesterol esters, *Goodman and Shiratori* 579

Chromatography, thin-layer

Detection of phospholipids, a simple specific spray for, *Dittmer and Lester* 126

Of naturally occurring phospholipids, *Abramson and Blecher* 628

Of prostaglandins, *Green and Samuelsson* 117

Quantitative gravimetric analysis of bovine semen lipids by, *Komarek, Jensen, and Pickett* 268

Rapid chemical quantification of lipids separated by, *Amenta* 270

Separation of cholesterol and desmosterol by, *Wolfman and Sachs* 127

To determine specific radioactivities of cholesterol esters, *Goodman and Shiratori* 579

Chromatoplates: Protection during exposure to iodine vapor, *Negishi, McKillican, and Lepage* 486

Chyle lipoprotein fraction: Very low density; cholesterol esters, in vitro uptake and hydrolysis, *Brot, Lossow, and Chaikoff* 63

Chylomicrons

Composition and removal from circulation, *Nestel and Scow* 46

Doubly labeled, uptake by mammary gland and liver, *McBride and Korn* 459

Formation and release, *Senior* 511

Metabolism of, triglyceride composition and, *Nestel and Scow* 46

Plasma; in man, lipid composition, *Wood, Imaichi, Knowles, Michaels, and Kinsell* 225

Uptake by mammary gland during lactation and pregnancy, *McBride and Korn* 453, 459

Cockroach: Cholesterol turnover in, *Vroman, Kaplanis, and Robbins* 418

Computer calculation: Of plasma and triglyceride turnover, *Schotz, Baker, and Chavez* 569

Concentration methods: For large quantities of biological fluids, *Jesting* 135
Cow: Fatty acid composition of triglycerides, *Mattson, Volpenhein, and Lutton* 364
Crustacean plankton: Environmental temperature and fatty acid composition, *Farkas and Herodek* 369
Cytolipin H: C_{20}-sphingosine in, *Sambasivarao and McCluer* 107

D

Deer: Fatty acid composition of triglycerides, *Mattson, Volpenhein, and Lutton* 364
7-Dehydrocholesterol: Location and biosynthesis in rat skin, *Gaylor and Sault* 422
Desmosterol: Separation from cholesterol by thin-layer chromatography, *Wolfman and Sachs* 127
Diacyl glycerol phosphate: Hydrolysis of, by phospholipase, *Lands and Hart* 81
Diet: Effect on neutral fecal steroids, *Eneroth, Hellström, and Ryhage* 245
Diglycerides: Preparation of methyl esters from, *Morrison and Smith* 600
Dimethylacetals
Formed from brain lipids, separation and isolation of, *Eng, Lee, Hayman, and Gerstl* 128
Preparation from lipids with boron fluoride–methanol, *Morrison and Smith* 600
Dose–response curves: For adipokinetic action of amines and adrenocorticotropin, *Rudman, Garcia, Brown, Malkin, and Perl* 28

E

Editorial announcements: *Ahrens* 1
Elaidic acid: Comparative metabolism in rat, *Coots* 468
Endotoxins
Production of fatty liver and BSP retention in rabbits, *Hirsch, McKay, Travers, and Skraly* 563
Serum lipid levels after injection of, *Hirsch, McKay, Travers, and Skraly* 563
Epinephrine: Effect on lipase activity of rat adipose tissue, *Strand, Vaughan, and Steinberg* 560
Erythrocytes: *see* **Red cells**
Ester bonds: Of lipids, hydrolysis of by pancreatic lipase, *Borgström* 522
Esterification: Of cholesterol by intestine, in vitro, total exclusion of exocrine pancreas and, *Lossow, Migliorini, Brot, and Chaikoff* 198
Ethanol
Administration, influence on liver triglyceride, *Poggi and Di Luzio* 440
Induction of fatty liver, role of adipose tissue and liver in, *Poggi and Di Luzio* 437
Solvent in small scale hydrogenation of methyl esters, *Ackman and Burgher* 130
Ether: α,β-unsaturated; in liver of various species, *Camejo, Rapport, and Morrill* 77
Euglena gracilis: Fatty acids of, *Korn* 352

F

Fat depot: Of man, fatty acids of, *Krut and Bronte-Stewart* 343
Fat pads
Epididymal; cannulation and perfusion of, *Ho and Meng* 203
conversion of glutamate to fatty acid via citrate in, *Madsen, Abraham, and Chaikoff* 548
Fats
Intestinal absorption of, *Senior* 495
problems to be solved, *Senior* 517
Intestinal intraluminal micelle formation, *Senior* 503
Natural, activities of microbial lipases on, *Alford, Pierce, and Suggs* 390
see also **Lipids**
Fatty acid anhydrides: Esterification of hydroxy compounds by, *Mattson, Volpenhein, and Martin* 374
Fatty acid carbon: Derivation from glutamate via citrate in rat epididymal fat pads, *Madsen, Abraham, and Chaikoff* 548
Fatty acids
Acceptors of; for glyceride synthesis in guinea pig mammary gland, *McBride and Korn* 448
Activation of, *Senior* 499
Branched-chain, in lipids of newly born lambs, *Downing* 210
Cholesterol ester; of human plasma lipoproteins, *Goodman and Shiratori* 310
Dietary, in relation to the composition of lipids from subcellular particles of liver, *Rahm and Holman* 169
Ester-linked mono- and diunsaturated, structures of, from pig brain, *Kishimoto and Radin* 98
Free, *see* **Free fatty acids**
Hydroxy, of sphingolipids, *O'Brien and Rouser* 341
2-Hydroxy unsaturated, structure of, from pig brain, *Kishimoto and Radin* 94
In glycerides, determination by gas–liquid chromatography, *Holla, Horrocks, and Cornwell* 263
Incorporation into phospholipids of erythrocyte membranes, *Oliveira and Vaughan* 156
Intravenous injections of, transient thrombopenia after, *Zbinden* 378
Metabolism in rat, *Coots* 468
Methyl esters; gas–liquid chromatography, source of contamination in ultramicro analysis by, *Johnston and Roots* 477
Nonhydroxy, of brain sphingolipids, *O'Brien and Rouser* 340
Of brain sphingolipids, *O'Brien and Rouser* 339
Of cerebroside sulfate of human cerebral gray and white matter, *O'Brien, Fillerup, and Mead* 109
Of crustacean plankton, environmental temperature and, *Farkas and Herodek* 369
Of *Euglena gracilis*, *Korn* 352
Of gangliosides, *Sambasivarao and McCluer* 104
Of glycerophosphatides from human cerebral gray and white matter, *O'Brien, Fillerup, and Mead* 329
Of human depot fat, *Krut and Bronte-Stewart* 343
Of lipoprotein fractions from human plasma, *Goodman and Shiratori* 307
Of phospholipids of human plasma lipoproteins, *Goodman and Shiratori* 311
Of phospholipids of red cells, *Ways and Hanahan* 325
Of plant sulfolipid and galactolipids, *O'Brien and Benson* 432
Of plasma lipoproteins from man, *Goodman and Shiratori* 307
Of portal fatty liver during lysine and threonine deficiency, *Viviani, Sechi, and Lenaz* 52
Of rat liver triglycerides, incorporation of acetate-C^{14} into, *Evans and Norcia* 395
Of serum from choline-deficient rats, *Tinoco, Shannon, and Lyman* 60
Of steryl glucoside ester from potato tuber lipids and soy bean phosphatides, *Lepage* 587
Of triglycerides from Artiodactyla, *Mattson, Volpenhein, and Lutton* 363

Of triglycerides from Congo palm oil, *Jurriens, de Vries, and Schouten* 366
Of triglycerides from human plasma lipoproteins, *Goodman and Shiratori* 310
Quantitative analysis, by gas–liquid chromatography, *Horning, Ahrens, Lipsky, Mattson, Mead, Turner, and Goldwater* 20
Single dietary polyunsaturated, liver lipids and, *Rahm and Holman* 169
Unsaturated, oxidation by leaf tissue, *Hitchcock and James* 593
Fatty aldehydes: Of glycerophosphatides of human cerebral gray and white matter, *O'Brien, Fillerup, and Mead* 329
Fatty liver
Ethanol-induced; role of liver and adipose tissue in pathogenesis, *Poggi and Di Luzio* 437
Hyperlipidemia and BSP retention in rabbits injected intravenously with bacterial endotoxins, *Hirsch, McKay, Travers, and Skraly* 563
Portal, fatty acid composition in lysine- and threonine-deficient rats, *Viviani, Sechi, and Lenaz* 52
Feces: Neutral steroids of, effect of diet, *Eneroth, Hellström, and Ryhage* 245
Feeding experiments: With water organisms, effect on fatty acid composition of fishes, *Farkas and Herodek* 372
Free fatty acids
Automatic titration of, *Schnatz* 483
Of butter oil distillates, *McCarthy, Kuksis, and Beveridge* 609
Preparation of methyl esters from, *Morrison and Smith* 600
Uptake by mammary gland during lactation and pregnancy, *McBride and Korn* 453

G

Galactolipids: Plant; isolation and fatty acid composition, *O'Brien and Benson* 432
Gangliosides
Analysis of, *Svennerholm* 152
Brain, chemical structure of, *Svennerholm* 148
C_{20}-sphingosine in, *Sambasivarao and McCluer* 107
Components of, *Svennerholm* 146
Fatty acid composition of, *Sambasivarao and McCluer* 104
Isolation from tissues, *Svennerholm* 151
Lipid components of, *Sambasivarao and McCluer* 103
Nomenclature, *Svennerholm* 145
Review, *Svennerholm* 145
Glucose: Effect on metabolism of glutamate and acetate in adipose tissue, *Madsen, Abraham, and Chaikoff* 548
Glucoside: Steryl; isolation and characterization of esterified form of, *Lepage* 587
Glutamate
Conversion of carbon from, to fatty acid via citrate in rat epididymal fat pads, *Madsen, Abraham, and Chaikoff* 548
Metabolism in absence of glucose, *Madsen, Abraham, and Chaikoff* 548
Glycerides
Chylomicron; uptake by mammary gland during lactation and pregnancy, *McBride and Korn* 453
Fate of glycerol from, *Senior* 498
Galactosyl, preparation of methyl esters from, *Morrison and Smith* 600
Incorporation of glycerol into, in guinea pig mammary gland, *McBride and Korn* 442
Lower; lipase activity against compared to hormone-sensitive activity against triglycerides, *Strand, Vaughan, and Steinberg* 554
Quantitative analysis of, *Jurriens, de Vries, and Schouten* 267
Serum; determination of, using a binary solvent system, *Galanos, Aïvazis, and Kapoulas* 242
Synthesis of; acceptors of fatty acids for, in guinea pig mammary gland, *McBride and Korn* 448
Glycerokinase: In guinea pig mammary glands, incorporation of glycerol into glycerides and, *McBride and Korn* 442
Glycerol
Color development; effect of protein during assay for lipoprotein lipase, *Levy and McGee* 265
Determination by gas–liquid chromatography, *Holla, Horrocks, and Cornwell* 263
Fate of, from glycerides, *Senior* 498
Free; quantitative determination by gas–liquid chromatography, *Jellum and Björnstad* 314
Incorporation into glycerides in guinea pig mammary gland, *McBride and Korn* 442
Glycerophosphatides: Ethanolamine, choline, and serine; composition and quantification of, from human cerebral gray and white matter, *O'Brien, Fillerup, Mead* 329
Gray matter: Man; quantification and composition of glycerophosphatides from, *O'Brien, Fillerup, and Mead* 329
Guinea pig
Mammary gland; acceptors of fatty acids for glyceride synthesis in, *McBride and Korn* 448
glycerokinase in, *McBride and Korn* 442
uptake of doubly labeled chylomicrons by, *McBride and Korn* 459
uptake of free fatty acids and chylomicron glycerides by, in pregnancy and lactation, *McBride and Korn* 453

H

Hamster: Isolated adipose tissue of; dose–response curves for aromatic amines and adrenocorticotropin, *Rudman, Garcia, Brown, Malkin, and Perl* 28
Heart
Fatty acid composition of lipids from, *Rahm and Holman* 174
Free carnitine concentration in, *Marquis and Fritz* 186
Heart disease, ischemic: Fatty acids of human depot fat and, *Krut and Bronte-Stewart* 349
Heparin: Release of phospholipase, *Vogel and Zieve* 177
Hippopotamus: Fatty acid composition of triglycerides, *Mattson, Volpenhein, and Lutton* 364
Hydrolysis: Of lipids, simplified procedure for, *Kates* 132
Hydroxy compounds: Esterification by fatty acid anhydrides, *Mattson, Volpenhein, and Martin* 374
5-Hydroxyindole acetic acid: Excretion after intravenous injection of fatty acids, *Zbinden* 383
Hyperlipidemia: Fatty liver, and BSP retention in rabbits injected intravenously with bacterial endotoxins, *Hirsch, McKay, Travers, and Skraly* 563

I

Insects
Distribution of steroids in tissues, *Clayton* 11
Functions of sterols in, *Clayton* 15
Nutritional requirements for sterols in, *Clayton* 4
Utilization of sterols by, *Clayton* 3
Insulin: Effect on metabolism of glutamate and acetate in adipose tissue, *Madsen, Abraham, and Chaikoff* 548
Intestine
Absorption of fats in, *Senior* 495

Esterification of cholesterol in vitro, total exclusion of exocrine pancreas and, *Lossow, Migliorini, Brot, and Chaikoff* 198
Mucosa of; estimation and subcellular distribution of lecithinase activity in, *Ottolenghi* 532
net effects of over-all mucosal process in fat absorption, *Senior* 514
uptake and hydrolysis of C^{14}-labeled cholesterol esters by, *Brot, Lossow, and Chaikoff* 65
Slices of; uptake of β-carotene and cleavage into retinol ester, effect of bile, *Olson* 402
Iodine vapor: Protection of chromatoplates during exposure to, *Negishi, McKillican, and Lepage* 486
Isomers, geometric: *trans-* and *cis-* of linoleic acid, comparison of metabolism in rat, *Coots* 473

K

Kidney
Free carnitine concentration in, *Marquis and Fritz* 186
Uptake and hydrolysis of C^{14}-labeled cholesterol esters by, *Brot, Lossow, and Chaikoff* 65

L

Lactation: Uptake of free fatty acids and chylomicron glycerides by mammary gland during, *McBride and Korn* 453
Lamb: Newly born; branched-chain fatty acids in lipids of, *Downing* 210
Leaf tissue: Oxidation of unsaturated fatty acids, *Hitchcock and James* 593
Lecithinase
Activity; in rat intestinal mucosa, estimation and subcellular distribution of, *Ottolenghi* 532
Assay; conditions for, *Ottolenghi* 533
Leukocytes: Accumulation of lipids in, in rats fed atherogenic diets, *Suzuki and O'Neal* 624
Linoleic acid: Comparison of metabolism of *cis,cis-*, *trans,trans-* and mixtures of *cis,trans-* and *trans,cis-* in rat, *Coots* 473
Lipase
Activity; hormone-sensitive against triglycerides, *Strand, Vaughan, and Steinberg* 554
Lipoprotein; effect of protein on glycerol color development during assay, *Levy and McGee* 265
Pancreatic; influence of bile salts, pH, and time on action, *Borgström* 522
Post-heparin, characteristics of, *Vogel and Zieve* 177
Lipases
Microbial; activity on natural fats and synthetic triglycerides, *Alford, Pierce, and Suggs* 390
Of rat adipose tissue, hormone-sensitive activity against triglycerides compared with activity against lower glycerides, *Strand, Vaughan, and Steinberg* 554
Lipids
Accumulation in leukocytes of rats fed atherogenic diets, *Suzuki and O'Neal* 624
Acidic; in butter oil, *McCarthy, Kuksis, and Beveridge* 609
Brain; fatty acid composition of cerebroside sulfate from human white and gray matter, *O'Brien, Fillerup, and Mead* 109
separation and isolation of methyl esters and dimethylacetals formed from, *Eng, Lee, Hayman, and Gerstl* 128
Chromatography of, *Crider, Alaupovic, Hillsberry, Yen, and Bradford* 479
Hydrolysis or methanolysis, simplified procedures for, *Kates* 132
Microsomal synthesis; dependence on added protein, *Tzur and Shapiro* 542
Of bovine semen; quantitative gravimetric analysis of, by thin-layer chromatography, *Komarek, Jensen, and Pickett* 268
Of macrophages; incorporation of C^{14}-labeled acetate into, *Day and Fidge* 163
Of newly born lamb; branched-chain fatty acids in, *Downing* 210
Of potato tuber; steryl glucoside ester, *Lepage* 587
Of red cells; in man, *Ways and Hanahan* 318
Of subcellular particles of liver; dietary effect on composition and diet, *Rahm and Holman* 169
Plasma level in rabbits receiving Shear's polysaccharide, *Hirsch, McKay, Travers, and Skraly* 563
Preparation of methyl esters from, by boron fluoride–methanol, *Morrison and Smith* 600
Rapid chemical quantification after separation by thin-layer chromatography, *Amenta* 270
Serum; effects of high spinal cord transection on, *Lewis and Page* 216
in choline deficiency, *Tinoco, Shannon, and Lyman* 57
in normal nonfasting males, *Lindgren, Nichols, Freeman, Wills, Wing, and Gullberg* 73
see also **Fats**
Lipophage ratio: Serum cholesterol, diet and, *Suzuki and O'Neal* 625
Lipoproteins
Chyle; very low density; cholesterol esters from, in vitro uptake and hydrolysis, *Brot, Lossow, and Chaikoff* 63
Influence on microsomal synthesis of lipids, *Tzur and Shapiro* 542
Low density; analysis of, by preparative ultracentrifugation and refractometry, *Lindgren, Nichols, Freeman, Wills, Wing, and Gullberg* 68
in normal nonfasting males, *Lindgren, Nichols, Freeman, Wills, Wing, and Gullberg* 73
Of human plasma; composition, *Goodman and Shiratori* 307
fatty acid composition, *Zilversmit* 300
Liver
Fatty, *see* **Fatty liver**
Incorporation of acetate-C^{14} into fatty acids of triglycerides and phospholipids of, *Evans and Norcia* 395
Plasmalogens of, *Camejo, Rapport, and Morrill* 75
Rat; turnover rates of different cholesterol esters, *Goodman and Shiratori* 578
Removal of chylomicrons from circulation by, *Nestel and Scow* 49
Role in pathogenesis of ethanol-induced fatty liver, *Poggi and Di Luzio* 437
Triglycerides of; effect of carbon tetrachloride ingestion on turnover rates, *Schotz, Baker, and Chavez* 569
Uptake and hydrolysis of C^{14}-labeled cholesterol esters by, *Brot, Lossow, and Chaikoff* 65
Uptake of doubly labeled chylomicrons by, *McBride and Korn* 459
Vitamin A content, species differences, *Camejo, Rapport, and Morrill* 77
Liver lipids
Analysis of, interference of vitamin A, *Camejo, Rapport, and Morrill* 75
Effect of dietary procedures on, *Viviani, Sechi, and Lenaz* 53
From subcellular particles, dietary effect on fatty acid composition, *Rahm and Holman* 169

Lymph
Absorption of cholesterol through, total exclusion of exocrine pancreas and, *Lossow, Migliorini, Brot, and Chaikoff* 198
Lipids of, appearance of C^{14} in, after feeding labeled fatty acids, *Coots* 471, 475
Lysine: Deficiency; fatty acid composition of portal fatty liver in, *Viviani, Sechi, and Lenaz* 52

M

Macrophages
Lipids of; incorporation of C^{14}-labeled acetate into, *Day and Fidge* 163
Oxygen consumption of, *Day and Fidge* 164
Mammary gland
Guinea pig; acceptors of fatty acids for glyceride synthesis in, *McBride and Korn* 448
glycerokinase in, *McBride and Korn* 442
uptake of doubly labeled chylomicrons by, *McBride and Korn* 459
uptake of free fatty acids and chylomicron glycerides by, in pregnancy and lactation, *McBride and Korn* 453
Man
Cerebral gray and white matter, quantification and composition of ethanolamine, choline, and serine glycerophosphatides from, *O'Brien, Fillerup, and Mead* 329
Erythrocytes from, phospholipid metabolism, *Robertson and Lands* 88
Excretion of neutral fecal steroids on two dietary regimens, *Eneroth, Hellström, and Ryhage* 245
Fatty acids of depot fat, *Krut and Bronte-Stewart* 343
Hydrolysis of lipids in duodenum and upper intestine, *Borgström* 529
Incorporation of fatty acids into erythrocyte ghosts, *Oliveira and Vaughan* 157
Plasma chylomicrons, lipid composition, *Wood, Imaichi, Knowles, Michaels, and Kinsell* 225
Plasma lipoprotein lipids, fatty acid composition, *Goodman and Shiratori* 307
Red cell lipids, characterization and quantification, *Ways and Hanahan* 318
Red cell, phospholipid classes in, *Ways and Hanahan* 326
Serum lipids and low-density lipoprotein in, *Lindgren, Nichols, Freeman, Wills, Wing, and Gullberg* 73
Melanocyte-stimulating hormones: Inactivation of, by adipose tissue, *Rudman, Malkin, Brown, Garcia, and Abell* 38
Metabolism
Model of, for plasma and liver triglycerides, *Baker and Schotz* 191, 194
Of chylomicrons, triglyceride composition and, *Nestel and Scow* 46
Of glutamate in adipose tissue, *Madsen, Abraham, and Chaikoff* 548
Of phosphatidic acid, *Lands and Hart* 81
Of triglycerides, calculated using multicompartmental models, *Baker and Schotz* 188
Methanolysis: Simplified procedure for, *Kates* 132
Methyl esters
Ethanol as solvent in small scale catalytic hydrogenations of, *Ackman and Burgher* 130
Formed from brain lipids, separation and isolation of, *Eng, Lee, Hayman, and Gerstl* 128
Of fatty acids, preparation from lipids with boron fluoride–methanol, *Morrison and Smith* 600
Methyl ketone precursor: In butter fat; isolation and characterization of, *Parks, Keeney, Katz, and Schwartz* 232
Microsomes: Synthesis of lipid, dependence on added protein, *Tzur and Shapiro* 542
Models: Multicompartmental, of triglyceride metabolism in rats, *Baker and Schotz* 188; *Schotz, Baker, and Chavez* 569
Monoglycerides
Preparation of methyl esters from, *Morrison and Smith* 600
Shunt pathway of metabolism, *Senior* 500
Monophosphoinositides: Preparation of methyl esters from, *Morrison and Smith* 600
Mucolipid: C_{20}-sphingosine in, *Sambasivarao and McCluer* 107
Muscle
Free carnitine concentration in, *Marquis and Fritz* 186
Uptake and hydrolysis of C^{14}-labeled cholesterol esters, *Brot, Lossow, and Chaikoff* 65

N

Norepinephrine: Dose–response data for adipokinetic action of, *Rudman, Garcia, Brown, Malkin, and Perl* 29

O

Obesity: Fatty acids of human depot fat in, *Krut and Bronte-Stewart* 346
Oleic acid: Comparative metabolism in rat, *Coots* 468

P

Palm oil, Congo: Quantitative semimicro analysis of triglyceride fatty acid distribution in, *Jurriens, de Vries, and Schouten* 366
Palmitic acid
Comparative metabolism in rat, *Coots* 468
Pathway and form of absorption in chicken, *Noyan, Lossow, Brot, and Chaikoff* 538
Pancreas: Exocrine; total exclusion, effect on esterification and lymphatic absorption of cholesterol, *Lossow, Migliorini, Brot, and Chaikoff* 198
Peccary: Fatty acid composition of triglycerides, *Mattson, Volpenhein, and Lutton* 364
Perfusion: Of epididymal fat pad, *Ho and Meng* 203
Periplaneta americana: Cholesterol turnover in, *Vroman, Kaplanis, and Robbins* 418
Phosphatides
Brain; comparison of values, *O'Brien, Fillerup, and Mead* 337
C_{20}-sphingosine in, *Sambasivarao and McCluer* 107
Ethanolamine; determination by gas–liquid chromatography, *Holla, Horrocks, and Cornwell* 263
Solubilization for use in blood clotting systems, *Turner, Silver, Baczynski, Giordano, and Rodalewicz* 616
Soy bean, steryl glucoside from, *Lepage* 587
Phosphatidic acid: Metabolism of, *Lands and Hart* 81
Phosphatidyl choline: Effect on degradation of phosphatidyl ethanolamine by phospholipase of post-heparin plasma or snake venom, *Vogel, Koppel, and Olwin* 385
Phosphatidyl ethanolamine: Degradation of, by phospholipase of post-heparin plasma or snake venom, effect of phosphatidyl choline, *Vogel, Koppel, and Olwin* 385
Phosphatidyl serines: Unsaturated racemic, synthesis and activity in blood clotting systems, *Turner, Silver, Baczynski, Giordano, and Rodalewicz* 616
Phosphoinositides: Brain; preparation of, *Kerr, Kfoury, and Djibelian* 481
Phospholipase
Post-heparin, *Vogel and Zieve* 177

Post-heparin (and snake venom), degradation of phosphatidyl ethanolamine by, effect of phosphatidyl choline, *Vogel, Koppel, and Olwin* 385

Phospholipids
Detection on thin-layer chromatograms, *Dittmer and Lester* 126
Incorporation of acetate-C^{14} into individual fatty acids by rat liver, *Evans and Norcia* 395
Metabolism in erythrocytes, *Robertson and Lands* 88
Of erythrocyte membranes, incorporation of fatty acids into, *Oliveira and Vaughan* 156
Of rat liver; incorporation of acetate-C^{14} into, *Evans and Norcia* 395
Of red cells of man; analytical and chromatographic data, *Ways and Hanahan* 324
distribution of fatty acids in, *Ways and Hanahan* 325
Of serum from choline-deficient rats, *Tinoco, Shannon, and Lyman* 59
Quantitative two-dimensional thin-layer chromatography of, *Abramson and Blecher* 628
Synthesis by microsomes, influence of added protein, *Tzur and Shapiro* 542

Pig: Domestic; fatty acid composition of triglycerides, *Mattson, Volpenhein, and Lutton* 364

Pituitary fraction H: Inactivation of, by adipose tissue, *Rudman, Malkin, Brown, Garcia, and Abell* 38

Plasma
Human; fatty acid composition of lipoprotein fractions, *Goodman and Shiratori* 307
Lipid levels in rabbits receiving Shear's polysaccharide, *Hirsch, McKay, Travers, and Skraly* 563
Post-heparin; phospholipase of, effect of phosphatidyl choline on degradation of phosphatidyl ethanolamine by, *Vogel, Koppel, and Olwin* 385
Rat; in vivo turnover of different cholesterol esters in, *Goodman and Shiratori* 578
Triglycerides; effect of carbon tetrachloride ingestion on turnover rates, *Schotz, Baker, and Chavez* 569

Plasmalogens
Interference of vitamin A in determination of, *Camejo, Rapport, and Morrill* 75
Of mammalian liver, *Camejo, Rapport, and Morrill* 75

Pleuropneumonia-like organisms: Relation of sterol structure to utilization in, *Smith* 121

Polysaccharide: Shear's; serum lipid levels in rabbits receiving, *Hirsch, McKay, Travers, and Skraly* 563

Portal vein: Absorption of palmitic acid in chicken via, *Noyan, Lossow, Brot, and Chaikoff* 538

Pregnancy: Uptake of free fatty acids and chylomicron glycerides by mammary gland during, *McBride and Korn* 453

Prostaglandins: Thin-layer chromatography of, *Green and Samuelsson* 117

Protein
Dependence of microsomal lipid synthesis on, *Tzur and Shapiro* 542
Effect on glycerol color development during assay for lipoprotein lipase, *Levy and McGee* 265

R

Rabbits: Hyperlipidemia, fatty liver, and BSP retention in, after injection of bacterial endotoxins, *Hirsch, McKay, Travers, and Skraly* 563

Race: Serum cholesterol concentration at various ages and in relation to, *Krut and Bronte-Stewart* 348

Rat
Biosynthesis of 7-dehydrocholesterol in skin of, *Gaylor and Sault* 422
Enzymological determination of free carnitine in tissues of, *Marquis and Fritz* 184
Fatty acid metabolism in, *Coots* 468
Lecithinase activity in intestinal mucosa of, *Ottolenghi* 532
Lipases from adipose tissue, activity of, *Strand, Vaughan, and Steinberg* 554
Metabolism of *trans*-and *cis*-isomers of linoleic acid in, *Coots* 473
Triglyceride metabolism, use of multicompartmental models to measure rates of, *Baker and Schotz* 188
Turnover rate of different cholesterol esters in liver and plasma, *Goodman and Shiratori* 578
Uptake and hydrolysis of lipoprotein cholesterol esters by tissues of, *Brot, Lossow, and Chaikoff* 63

Red cells
Characterization and quantification of lipids in, *Ways and Hanahan* 318
Membrane of; incorporation of fatty acids into, *Oliveira and Vaughan* 156
Phospholipid metabolism in, *Robertson and Lands* 88

Refractometry: In analysis of low density lipoproteins, *Lindgren, Nichols, Freeman, Wills, Wing, and Gullberg* 68

Retinal: Properties of enzymes oxidizing, *Olson* 292

Retinoic acid: Metabolism of, *Olson* 293

Retinol
Biosynthesis and metabolism of, review, *Olson* 281
Ester; formation from β-carotene by intestinal slices, bile and, *Olson* 402
Esterases; properties of, *Olson* 289
Geometric isomers of, biological potency of, *Olson* 291
Metabolism of, *Olson* 288

S

Saran wrap: Use to protect chromatoplates during exposure to iodine vapor, *Negishi, McKillican, and Lepage* 486

Serum
Determination of free glycerol in, *Jellum and Björnstad* 314
Determination of glycerides, free cholesterol, and cholesterol esters using a binary solvent system, *Galanos, Aïvazis, and Kapoulas* 242
Free carnitine concentration in, *Marquis and Fritz* 186

Sex
Fatty acids of human depot fat and, *Krut and Bronte-Stewart* 346
Serum lipids in choline deficiency and, *Viviani, Sechi, and Lenaz* 52

Sheep: Fatty acid composition of triglycerides, *Mattson, Volpenhein, and Lutton* 364

Skin: Rat; location and biosynthesis of 7-dehydrocholesterol in, *Gaylor and Sault* 422

Snake venom: Phospholipase of, effect of phosphatidyl choline on degradation of phosphatidyl ethanolamine by, *Vogel, Koppel, and Olwin* 385

Species differences
In carnitine concentration, *Marquis and Fritz* 187
In effect of bile on cleavage of β-carotene into retinol ester, *Olson* 404
In inactivation of adipokinetic action of various substances, *Rudman, Malkin, Brown, Garcia, and Abell* 38
In incorporation of linoleic acid-1-C^{14} into phospholipids of ghost erythrocytes, *Oliveira and Vaughan* 160

In vitamin A content of liver, *Camejo, Rapport, and Morrill* 77
Spectrometry, mass: Identification and quantification of neutral fecal steroids by, *Eneroth, Hellström, and Ryhage* 245
Spectrophotometry, infrared: Simultaneous determination of triglycerides and cholesterol esters by, *Freeman* 236
Spherocytosis: Phospholipid metabolism in erythrocytes in, *Robertson and Lands* 88
Sphingolipids
Brain; fatty acid composition of, *O'Brien and Rouser* 339
C_{20}-sphingosine in, *Sambasivarao and McCluer* 107
Pig brain; structures of 2-hydroxy unsaturated acids from, *Kishimoto and Radin* 94
Sphingomyelin
Brain, fatty acid composition of, *O'Brien, and Rouser* 339
C_{20}-sphingosine in, *Sambasivarao and McCluer* 107
Preparation of methyl esters from, *Morrison and Smith* 600
Sphingosine: C_{20}-; in lipids from various tissues, *Sambasivarao and McCluer* 107
Spinal cord: Transection; effect on serum lipids, *Lewis and Page* 216
Stearic acid: Comparative metabolism in rat, *Coots* 468
Steroids
-C^{14}; distribution, in tissues of *Eurycotis floridana* reared on labeled cholesterol, *Clayton* 11
-H^3; distribution, in tissues of *Eurycotis floridana* reared on labeled cholesterol, *Clayton* 11
Neutral fecal; identification and quantification, and effect of dietary regimens on, *Eneroth, Hellström, and Ryhage* 245
Polar; distribution, in tissues of *Eurycotis floridana* reared on cholesterol, *Clayton* 11
Sterol esters: Preparation of methyl esters from, *Morrison and Smith* 600
Sterol structure: Relation to utilization in pleuropneumonia-like organisms, *Smith* 121
Sterols
Function in insects, *Clayton* 15
In butter oil, *McCarthy, Kuksis, and Beveridge* 609
Neutral, influence of dietary cholesterol on excretion of, *Wilson* 414
Nutritional requirements for insects, *Clayton* 4
Utilization by insects, review, *Clayton* 3
Steryl glucoside: Isolation and characterization of esterified form of, *Lepage* 587
Sulfolipid: Plant; isolation and fatty acid composition, *O'Brien and Benson* 432

T

Temperature: Environmental; fatty acid composition of crustacean plankton and, *Farkas and Herodek* 369
Testes
Fatty acid composition of lipids from, *Rahm and Holman* 174
Free carnitine concentration in, *Marquis and Fritz* 186
Threonine deficiency: Fatty acid composition of portal fatty liver in, *Viviani, Sechi, and Lenaz* 52
Thrombopenia: Transient; after intravenous injection of certain fatty acids, *Zbinden* 378
Titration: Automatic, of free fatty acids, *Schnatz* 483
Triglycerides
Determination, simultaneously with cholesterol esters, *Freeman* 236
Fatty acids of; from Artiodactyla, *Mattson, Volpenhein, and Lutton* 363
from Congo palm oil, *Jurriens, de Vries, and Schouten* 366
Hormone-sensitive activity of rat adipose tissue lipases compared with activity against lower glycerides, *Strand, Vaughan, and Steinberg* 554
Hydrolysis of, by pancreatic lipase, *Borgström* 522
Liver and plasma; effect of carbon tetrachloride ingestion on turnover rates, *Schotz, Baker, and Chavez* 569
Metabolism of, measured in multicompartmental models, *Baker and Schotz* 188
Of rat liver, incorporation of acetate-C^{14} into, *Evans and Norcia* 395
Of serum from choline-deficient rats, *Tinoco, Shannon, and Lyman* 59
Preparation of methyl esters from, *Morrison and Smith* 600
Synthetic; activities of microbial lipases on, *Alford, Pierce, and Suggs* 390

U

Ultracentrifugation: In analysis of low density lipoproteins, *Lindgren, Nichols, Freeman, Wills, Wing, and Gullberg* 68

V

Vasopressin: Inactivation of, by adipose tissue, *Rudman, Malkin, Brown, Garcia, and Abell* 38
Vitamin A
Biosynthesis and metabolism of, review, *Olson* 281
Ester; production of, by intestinal slices, *Olson* 402
Interference in plasmalogen determinations, *Camejo, Rapport, and Morrill* 75
Species differences in liver content, *Camejo, Rapport, and Morrill* 77

W

White matter: Man; quantification and composition of glycerophosphatides from, *O'Brien, Fillerup, and Mead* 329

NEW METHODS INDEX

VOLUME 5 NUMBERS 1–4

Compiled by H. A. I. Newman

The numbers in this Index refer to entry numbers in the New Methods listings. They are found on the following pages of Volume 5:

Nos. 1–133 pp. 138–142
Nos. 134–238 pp. 275–278
Nos. 239–381 pp. 487–492
Nos. 382–452 pp. 632–634

BILE ACIDS:
- **Chromatography:**
  - **Gas–liquid:** 63, 64
  - **Paper:** 196
  - **Thin-layer:** 62, 195, 197, 421, 422

CHROMATOGRAPHY:
- **Column:** 234, 237, 380, 452
- **Gas–liquid:** 4, 5, 11, 141, 142, 143, 144, 146, 149, 151, 260, 261, 382, 386, 392, 395, 396, 397, 398
- **Glass fiber:** 130
- **Thin-layer:** 131, 132, 233, 235, 236, 238, 379, 381, 450, 451

ENZYMES:
- **Lipase:** 128, 129, 232, 264
- **Phospholipase A:** 449
- **Steroid sulfatase:** 275

FAT SOLUBLE VITAMINS AND DERIVATIVES: 370, 446
- **Tocopherols:** 122, 230, 231, 372, 373, 445, 447,448
- **Vitamin A and related compounds:** 123, 371, 375, 376, 385, 445
- **Vitamin D and related compounds:** 374, 444
- **Vitamin K:** 230

FATTY ACIDS AND METHYL ESTERS: 97, 156, 211, 334, 349, 435
- **Chromatography:** 77, 93, 209, 352
  - **Column:** 83, 213
  - **Gas–liquid:** 2, 3, 7, 81, 89, 91, 95, 98, 134, 135, 136, 138, 147, 239, 240, 241, 246, 247, 250, 251, 256, 387, 388, 394
  - **Internal standard:** 254
  - **Ion exchange:** 214
  - **Paper:** 80, 329, 337
  - **Thin-layer:** 79, 93, 95, 347, 353
- **Cyclic:** 81
- **Cyclopropanoid:** 338, 346, 429
- **Essential:** 99, 214
- **Free:** 331, 332, 333, 428
- **Hydroperoxides and related compounds:** 92, 102, 209, 338
- **Hydroxy:** 89, 90, 347, 394, 434
- **Methylation:** 256, 345, 351, 393, 405, 430
- **Polyunsaturated:** 85, 239, 330, 340
- **Saturated:** 77
- **Steam volatile:** 3, 82, 91, 147, 213, 240
- **Unsaturated:** 78, 79, 80, 86, 94, 95, 98, 134, 135, 136, 208, 210, 214, 345, 348
  - **Cis-trans:** 7, 93, 246, 251

FATTY ACID ESTERS: 84, 87, 88, 350

FATTY ALCOHOLS: 9, 354
- **Chromatography:** 341
  - **Column:** 96
  - **Gas–liquid:** 384
  - **Paper:** 212
  - **Thin-layer:** 434

FATTY ALDEHYDES: 334
- **Chromatography:**
  - **Gas–liquid:** 250
  - **Thin-layer:** 431

FATTY AMINES: 343, 344

GLYCERYL ETHERS: 100
- **Chromatography:**
  - **Thin-layer:** 434

GLYCERIDES: 101, 103, 105, 216, 218, 219, 335, 402, 433, 435
- **Chromatography:**
  - **Column:** 217, 220
  - **Gas–liquid:** 145, 399
  - **Paper:** 329
  - **Thin-layer:** 208, 215, 355, 434
- **Peroxidized:** 399
- **Structure:** 104, 399, 432

GLYCOLIPIDS: 65, 198, 199, 200, 201, 202
- **Cerebrosides:** 342
- **Chromatography:** 222
  - **Thin-layer:** 203, 439
- **Histochemical determination:** 106
- **Hydrolysis products analysis:** 66, 67, 68

HYDROCARBONS:
- **Chromatography:**
  - **Gas–liquid:** 148
  - **Thin-layer:** 336
- **Olefins:** 336

LIPIDS: 16, 17, 156, 271, 401, 406
- **Chromatography:** 160
  - **Column:** 152, 154
  - **Gas–liquid:** 10, 137, 139, 263, 390
  - **Thin-layer:** 12, 152, 155, 263, 265, 404
  - **Paper:** 400
- **Extraction, purification, and solvent removal:** 153, 158, 262, 266, 267, 268, 272, 403, 405
- **Fatty acid composition:** 152
- **Fractionation:** 157, 159
- **Histochemical determination:** 15, 264

Hydrolysis: 269
Methanolysis: 269
Peroxidized: 270
Polymers: 14, 356
Products of auto-oxidized fat: 14
LIPOPROTEINS: 124, 125, 126, 127, 271, 377, 378
PARAFFINS: 9
PHOSPHOLIPIDS: 110, 111, 361, 365, 440
Fatty acid composition: 208
Chromatography: 222
Column: 75, 108, 117
Paper: 115, 227, 437
Thin-layer: 107, 112, 114, 116, 208, 364, 367, 439
Countercurrent separation: 223
Extraction: 226
Histochemical determination: 106, 362, 436, 441, 442
Hydrolysis products analysis: 107, 224, 359, 360
Malignolipin: 437, 438
Noncholine containing: 225
Phosphorus determination: 109, 221, 357, 363, 366, 368, 369
Plasmalogens: 113, 118, 358
Sphingomyelin: 222, 342
PROSTAGLANDINS:
Chromatography:
Thin-layer: 316, 339
STEROIDS: 19, 21, 25, 50, 52, 55, 58, 61, 167, 185, 191, 273, 274, 277, 281, 300, 306, 407
Adrenal: 18, 22, 26, 39, 40, 41, 42, 45, 53, 56, 57, 161, 163, 164, 165, 168, 172, 173, 178, 182, 242, 248, 279, 280, 289, 301, 303, 304, 305, 307, 314, 391, 408, 409, 411, 417, 418
Androgenic: 27, 28, 30, 33, 43, 49, 193, 285, 308, 410, 416
Biliary: 297
Blood: 178
Blood plasma: 43, 56, 178, 182, 280, 307, 310, 411, 417
Chromatography: 36, 40, 47, 54, 279, 302
Column: 283, 290
Gas–liquid: 1, 22, 23, 28, 32, 42, 60, 161, 175, 242, 243, 244, 245, 248, 249, 253, 257, 258, 284, 285, 297, 299, 315, 383, 391, 410, 413
Gel filtration: 20, 173, 415
Glass fiber: 295, 305
Ion exchange: 29, 34, 35, 179
Paper: 41, 170, 188, 192, 282, 291, 414
Thin-layer: 18, 37, 38, 45, 46, 163, 164, 172, 174, 184, 190, 278, 285, 286, 288, 293, 294, 301, 311, 312, 412, 416
Estrogenic: 38, 42, 48, 51, 60, 162, 174, 177, 179, 183, 187, 249, 253, 288, 297, 298, 299, 302, 309, 310, 412
Conjugated: 20, 29, 31, 34, 35, 181, 291, 292, 415
Progestational: 24, 36, 37, 42, 49, 59, 175, 176, 186, 244, 284, 290, 313
Sapogenins: 180, 189
Urinary: 18, 20, 22, 24, 28, 34, 35, 39, 44, 48, 60, 162, 166 169, 171, 173, 175, 176, 178, 181, 183, 187, 193, 194, 257, 276, 283, 287, 289, 292, 295, 296, 298, 304, 305, 413, 419, 420
STEROL ESTERS: 207
Chromatography:
Column: 72, 75
Gas–liquid: 389
Paper: 205
Thin-layer: 73, 133, 208, 327
STEROLS: 71, 74, 76, 204, 206, 319, 320, 321, 323, 234, 325, 326, 423, 424, 426, 427
Chromatography:
Column: 75
Gas–liquid: 6, 13, 70, 96
Thin-layer: 327, 328, 425
SULFATIDES: 69, 317
Chromatography:
Paper: 318
TERPENES: 8, 52, 119, 228
Chromatography:
Column: 229
Gas–liquid: 120, 121, 140, 150, 229, 252, 255, 259
Thin-layer: 120, 229, 425, 443
UBIQUINONE: 373
WAXES: 402
Chromatography:
Thin-layer: 133